From: Hayter, Earl J ERDC-RDE-EL-MS
To: Miller, Garyg
Subject: RE: San Jacinto Feasibility Study
Date: Saturday, June 07, 2014 9:57:20 AM

Gary,

Don't hesitate to let me know if any other issue or question on the modeling that AnchorQEA did comes up.

Earl

> -----Original Message-----
> From: Miller, Garyg [mailto:Miller.Garyg@epa.gov]
> Sent: Friday, June 06, 2014 8:47 AM
> To: Hayter, Earl J ERDC-RDE-EL-MS
> Subject: RE: San Jacinto Feasibility Study
>
> Thanks Earl; this answers my question about how the 2005 Sediment
> Remediation Guidance statements about model limitations relates to the
> San Jacinto Site.
>
> Regards,
>
> Gary Miller
> EPA Remedial Project Manager
> 214-665-8318
> miller.garyg@epa.gov
>
> -----Original Message-----
> From: Hayter, Earl J ERDC-RDE-EL-MS [mailto:Earl.J.Hayter@erdc.dren mil]
> Sent: Thursday, June 05, 2014 5:34 PM
> To: Miller, Garyg
> Subject: RE: San Jacinto Feasibility Study
>
> Gary,
>
> Anchor QEA runs their sediment transport model decoupled from their
> hydrodynamic model, or in what is called the non-morphologic mode. What
> this means is that predicted changes in bed elevations (and therefore
> water depths) in grid cells due to erosion or deposition are not
> accounted for in the hydrodynamic model. As a result, the flow field is
> not adjusted to account for changes in bed elevations and therefore water
> depths.
>
> Sediment transport models that are currently used today for simulating
> the transport of sediment in rivers, estuaries and coastal seas are not
> able to 1) predict changes in channel widths, due to, e.g., bank erosion
> on the outer bend of a meandering river, or 2) predict changes in
> planform geometry due to meandering of a river/stream channel.
>
> Existing sediment transport models are frequently used to simulate 'big
> events' such as a 100-year flood. However, to do this would usually
> require more parameterization, an example of which is specifying a
> thicker initial sediment bed in areas that undergo net erosion during
> higher frequency events, e.g., 10-year flood. It would also require the

> sediment transport model to be run in the morphologic mode, i.e., with
> the hydrodynamic and sediment transport models run in the dynamically
> linked or coupled mode. If the model predicted an area of significant
> scour, then the flow field in this portion of the model grid should be
> examined during the portion of the event when most of the scour occurred
> (e.g., during the rising limb of a flood event) to see if the simulated
> flows exhibit any signs of numerical instability that sometimes occur due
> to the use of too large a time-step and/or too coarse a grid.
>
> Let me know if this is what you need.
>
> Earl
>
> > -----Original Message-----
> > From: Miller, Garyg [mailto:Miller.Garyg@epa.gov]
> > Sent: Wednesday, November 13, 2013 12:37 PM
> > To: Schroeder, Paul R ERDC-RDE-EL-MS; Hayter, Earl J ERDC-CHL-MS
> > Subject: [EXTERNAL] FW: San Jacinto Feasibility Study
> >
> > Next part of Feasibility Study - this is the first part of appendices.
> >
> >
> >
> > Gary Miller
> >
> > EPA Remedial Project Manager
> >
> > 214-665-8318
> >
> > miller.garyg@epa.gov
> >
> >
> >
> > From: Miller, Garyg
> > Sent: Wednesday, November 13, 2013 10:21 AM
> > To: Paul R Schroeder (Paul.R.Schroeder@erdc.dren mil); Hayter, Earl J
> > ERDC-CHL-MS
> > Subject: FW: San Jacinto Feasibility Study
> >
> >
> >
> > Next part of San Jac Feasibility Study
> >
> >
> >
> > Gary Miller
> >
> > EPA Remedial Project Manager
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> > 214-665-8318
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> > miller.garyg@epa.gov
> >
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> >
> > From: Miller, Garyg
> > Sent: Tuesday, November 12, 2013 3:20 PM

> > To: Paul R Schroeder (Paul.R.Schroeder@erdc.dren mil); Hayter, Earl J
> > ERDC-CHL-MS
> > Subject: San Jacinto Feasibility Study
> >
> >
> >
> > Here is the Feasibility Study for the San Jacinto Site - this is the
> > first of 4 parts (too big to email together.
> >
> >
> >
> > Paul - please review/comment on the adequacy of the proposed cap
> > repairs/upgrades - and anything else you see. Does the plan seem
> > adequate in light of your review of the TCRA cap? Slope? Materials
> > grading? Areas proposed for additional work?
> >
> >
> >
> > Earl - please review/comment on the potential impacts of the various
> > alternatives on the river flow/navigation capacity - see anything that
> > wouldn't be acceptable or could cause flooding?; and anything you see
> > that should be further clarified or discussed; also please
> > review/comment on the relative impacts of re-suspending contaminated
> > sediment due to dredging, mitigation measures, etc. Do the
> > concentrations included in the Feasibility Study bar graphs seem
> > reasonable? Perhaps what has been the experience at other dredging
> > sites? During the TCRA construction they used silt curtains, but the
> current kept moving them around.
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> >
> > Thanks, and please let me know if you have any questions. FYI, I have
> > left a message regarding the WAF with Kathleen Robinson here who I
> > believe dealt with Marvene Seaman at your end.
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> >
> > Regards,
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> >
> > Gary Miller
> >
> > EPA Remedial Project Manager
> >
> > 214-665-8318
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> > miller.garyg@epa.gov
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